

AN INTERESTING AND PRIMITIVE NEW GENUS OF
LAELAPTIDAE (ACARINA) FROM AUSTRALIA
AND NEW GUINEA

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IN 1938, Trägårdh (Entom. Tidskft. Hft. 3.4, p. 123) published his important paper "Further Contributions towards the Comparative Morphology and Classification of the Mesostigmata." In this paper he stressed the importance of the ventral shields of this group of Acarina, especially in the female sex, as affording valuable evidence of the relationship of the various genera.

In his view the four pairs of setae found on the jugular, sternal and metasternal shields indicate the coxal plates of the four pairs of legs. (It is generally accepted that the sternal shield in the Acarina is really formed by the fusion of coxal plates and that a true sternal shield does not occur). Generally in the Mesostigmata the sternal shield carries 2, 3 or 4 pairs of setae, mostly 3 pairs, the fourth pair often being found on the pair of small metasternal shields, as in *Pergamasus* and *Macrocheles*.

In front of the sternal shield frequently occur 1 or 2 pairs of small shields, generally termed the jugular shields, one pair of which (posterior if 2 are present) often bear a pair of setae. If these carry a seta they are regarded by Trägårdh as representing the coxal plates of leg I and then it is found that the sternal shield bears only 2, or if the metasternal plates are fused with it, 3 pairs of setae. If the anterior pair of small plates do not bear setae, they are then considered as having nothing to do with leg I, and are termed "pre-endopodal shields" by Trägårdh. In these cases the true coxal plates of leg I are fused with the sternal shield and their pair of setae are found thereon.

The new genus, with two species described in this paper, furnishes further evidence of Trägårdh's views, in that the sternal shield is longitudinally divided down the middle, each half carrying 3 setae with the corresponding pores. Each half therefore bears the setae corresponding to the coxal plates of legs I to III. The metasternal shields are wanting but are represented by the setae and their corresponding pores.

It appears evident, then, that the new genus, *Scissuralaelaps* is more primitive than any genus of the Mesostigmata or *Laclaptidae* so far known in that coalescence of the coxal plates in the medial line has not taken place.

FAMILY LAELAPTIDAE.

Genus *SCISSURALAELAPS* nov.

Description. *Hypospis*-like. Lightly chitinized with moderately long to short fine dorsal setae. Female with sternal shield divided longitudinally, ventral shield fused with genital, widely separated from anal. Pre-endopodal shields present or absent. Meta-sternal shields only represented by seta and pore. Dorsal shield entire, not entirely covering body. Male with sternal, genito-ventral and shields coalesced. Legs without strong spines or processes. Mandible with process on movable finger of chelicerae.

Type *Scissuralaelaps nova-guinea* sp.n.

SCISSURALAELAPS NOVA-GUINEA sp. nov.

Fig. 1, A-G.

Description. Female. Oval in shape and well chitinized. Length (excluding gnathosoma) 675μ , width 405μ , gnathosoma 90μ . Dorsal shield as in fig. 1 A occupying about $\frac{7}{6}$ of dorsum, with sparse, short, 7μ setae. Epistome and chelicerae as figured. Palpi 5-segmented, V with bifurcate appendage. Legs

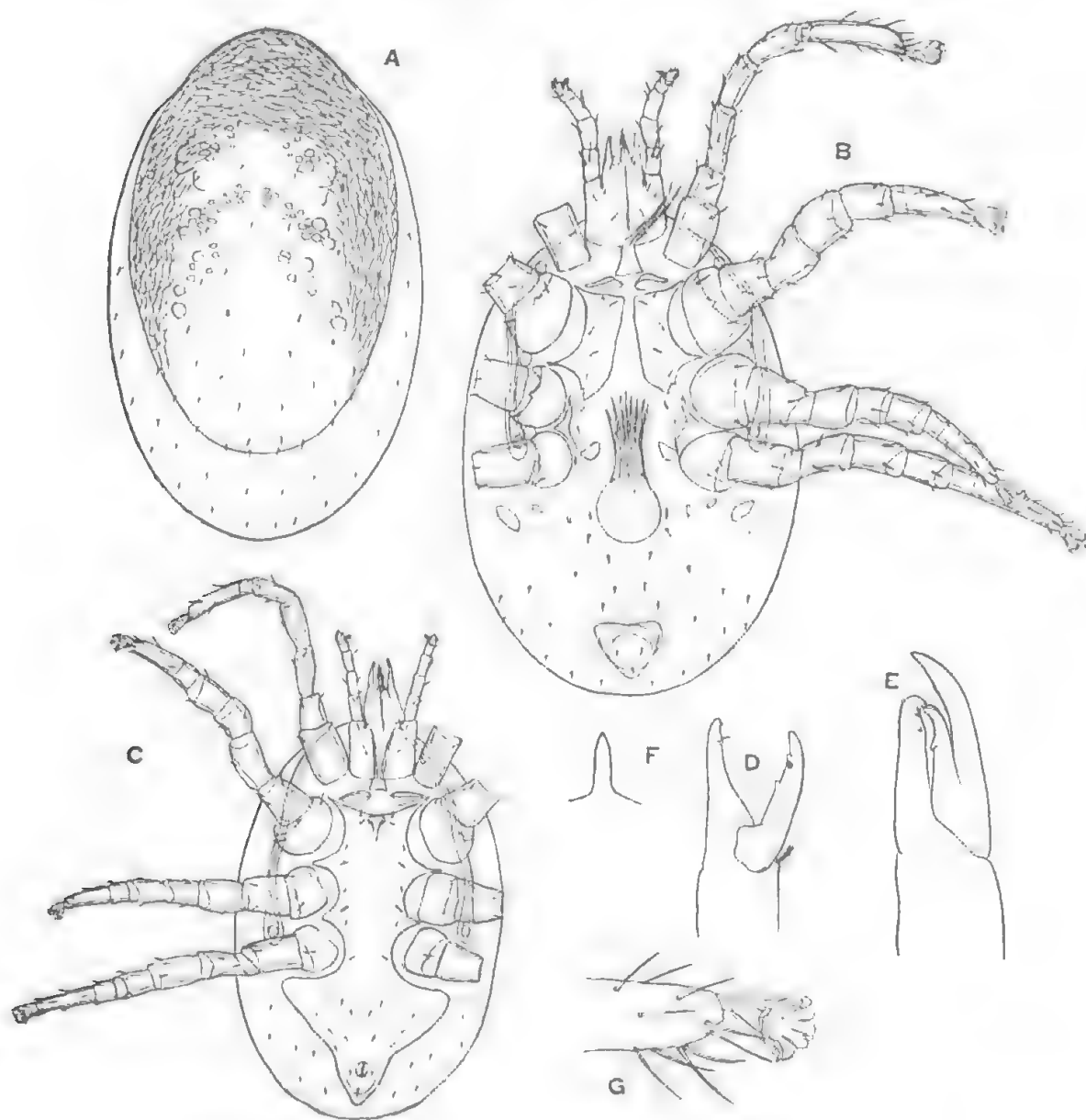


Fig. 1. *Scissuralaelaps nova-guinea* g. et sp. n. A. dorsum ♀; B. venter ♀; C. venter ♂; D. mandibles ♀; E. mandibles ♂; F. epistome; G. apex tarsus III.

relatively shorter and thicker than in following species, II stouter than the others, I 450μ long, II 375μ , III 430μ , IV 480μ , only furnished with normal setae; tarsi with earuncle and paired claws. Venter: pre-endopodal shields well defined (cf. fig. 1B); sternal shield completely divided longitudinally, each half with 3 setae and 2 pores; metasternal shields absent and only represented by the setae and

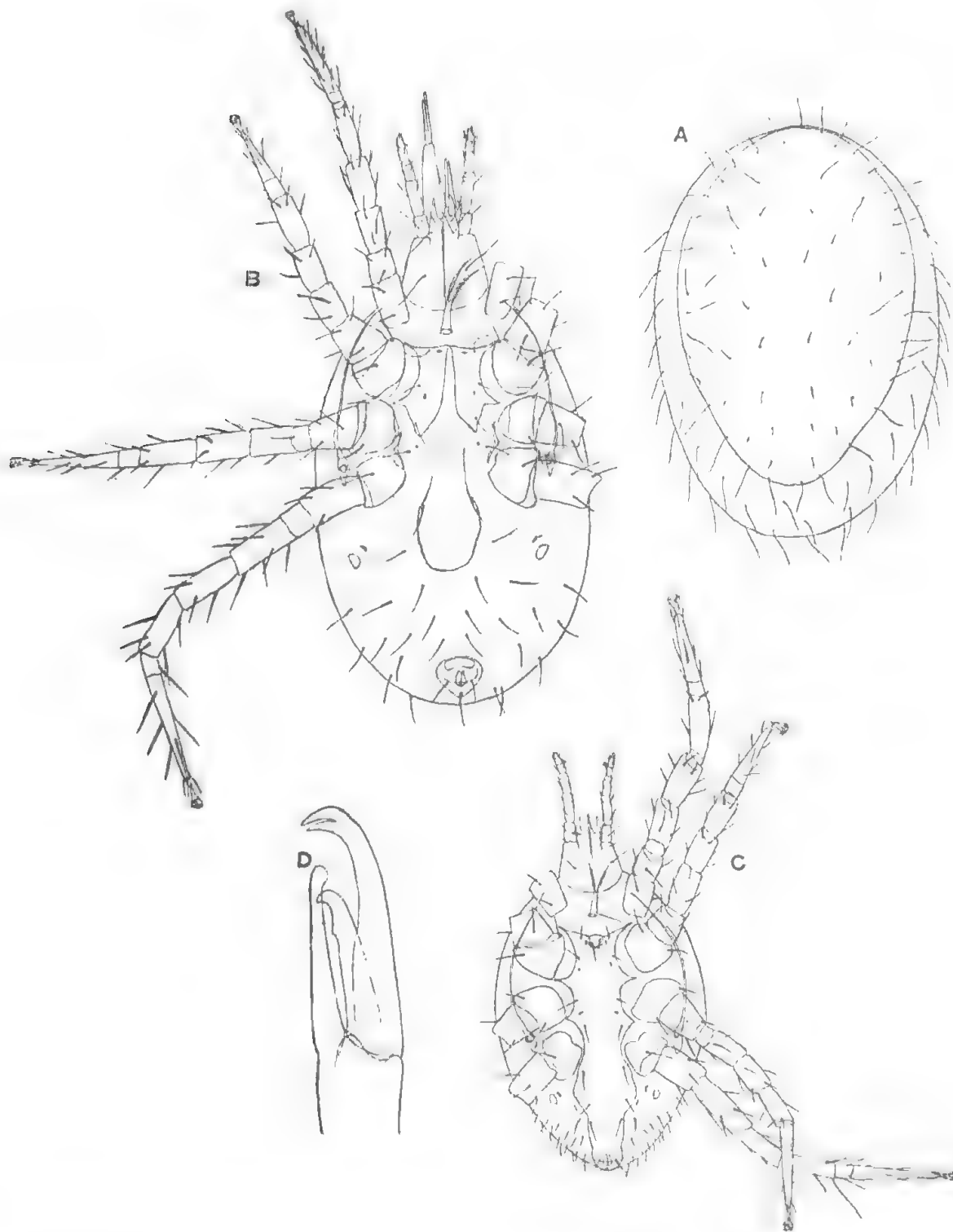


Fig. 2. *Scissuralaelaps queenslandica* sp. n. A. dorsum ♀; B. venter ♀; C. venter ♂; D. mandibles ♂.

pores; endopodal shields between coxae III and IV present; also on inside of coxae IV another rather triangular shield; genito-ventral shield as in fig. 1B with only a single pair of setae; behind coxae IV and on each side of genito-ventral is a somewhat oval shield and on inside of these two smaller shields; anal shield triangular with the usual 3 setae, and well separated from genito-ventral; ventral

setae short and fine. Gnathosoma with a pair of short simple setae. Peritreme long and slender.

Male, as in female, but length to 520 μ , width 370 μ , gnathosoma 150 μ ; dorsal shield occupying almost whole of dorsum. Chelicerae as in fig. 1E. All ventral shields coalesced except pre-endopodal; genito-ventral portion expanded widely behind coxae IV.

Loc. and Host. Described from 4 females and 1 male from a millipede on orchids from New Guinea and received at Burnley Gardens Research Station, Melbourne, 21.3.39 (R.T.M.P.).

Remarks. The primitive nature of this genus and species is discussed in the introduction.

SCISSURALAELAPS QUEENSLANDICA sp. nov.

Fig. 2 A-D.

Description. Female. Shape ovoid, well chitinized. Length (excluding gnathosoma) to 1,500 μ , width 975 μ , gnathosoma 300 μ . Dorsal shield occupying about $\frac{5}{6}$ of the dorsum, marginally with long fine simple setae to 150 μ long, and on disc with short sparse setae to 40 μ long. Epistome and chelicerae as in *S. nova-guinea*. Palpi as in genotype, V with bifurcate appendage. Legs relatively long and slender, without any thickening of II, I 1,200 μ long, II 1,050 μ , III 1,350 μ , IV 1,700 μ , only furnished with normal setae; tarsi with caruncle and paired claws. Venter; gnathosoma with a pair of simple setae; pre-endopodal shields practically wanting; sternal shield divided longitudinally except at extreme anterior margin, as in fig. 2B, each half with 3 setae and 2 pores, the setae about 70 μ long; metasternal shields wanting and only represented by the setae and pores; endopodal shields between coxae III and IV present; genito-ventral shield as in fig. 2B, with only 1 pair of setae; on each side of genito-ventral shield and behind coxae IV is a small oval shield with a smaller crescent-like shield on its inside; anal shield, as in fig. 2B, well separated from genito-ventral. Peritreme long and slender.

Male. As in female but smaller, length 1,125 μ , width 705 μ , gnathosoma 220 μ . Dorsal shield occupying almost the whole of dorsum. Legs I 1,200 μ , II 1,050 μ , III 1,200 μ , IV 1,380 μ , not differentiated from those of female. Venter: all shields except pre-endopodal coalesced as in fig. 2C; genito-ventral portion very much broadened behind coxae IV. Chelicerae as in fig. 2D.

Loc. Two males and one female from Bardon, Queensland, 1943 (N.B.T.).

Remarks. Differs from the genotype in the dorsal setae, the broadening behind coxae IV of the genito-ventral portion of the fused ventral plates of the male, in the relatively longer and thinner legs in both sexes, and in the coalescence of the coxal plates in the neighbourhood of leg I still being in evidence.